REMARKS

Claims 1-20 were pending. Claims 1, 4, 9, 12, 17, 18 and 20 have been amended. Claims 3, 11, and 19 have been cancelled. Therefore claims 1-2, 4-10, 12-18, and 20 remain pending in the application subsequent entry of the present amendment.

35 U.S.C. § 101 Rejections

In the present Office Action, claims 17-20 stand rejected under 35 U.S.C. § 101 as being directed to non-statutory subject matter. Claim 19 has been cancelled and the rejection directed to this claim is rendered moot. Claims 17, 18, and 20 have been amended in a manner believed to overcome the rejection.

35 U.S.C. § 102 and § 103 Rejections

In the present Office Actions, claims 1-2, 9-10, and 17-18 stand rejected under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent No. 6,625,623 (hereinafter "Midgley"). In addition, claims 3-8, 11-16, and 19-20 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Midgley, in view of U.S. Patent No. 5,680,573 (hereinafter "Rubin"). Applicant respectfully traverses at least some of the above rejections and requests reconsideration.

For example, Applicant submits the cited art, either singly or in combination, does not disclose all of the features of claim 1. As amended, claim 1 recites a computing system which includes:

> "an application configured to initiate write transactions;
> a first storage device configured to store data corresponding to said write
>   transactions;
> a memory pool; and

a replicator component configured to:
    monitor said write transactions;
    allocate buffers from said memory pool for said write transactions; and
    modify system resources in response to I/O characteristics of said
        monitored write transactions, wherein modifying said system
        resources includes modifying a size of said memory pool."

Applicant submits at least the above highlighted features are neither taught nor suggested by the cited art. With respect to the recited modifying of system resources in response to I/O characteristics of said monitored write transactions, Midgley is cited as disclosing these features in the following:

"... In practice, the system 10 of FIG. 1 will use by default as much available network bandwidth as it needs to back up or restore data. However, in one optional embodiment, the system 10 allows a user to specify the maximum amount of network bandwidth that it may consume when backing up or restoring data. ...

To this end, the back up server 12 may provide a bandwidth control process 44 that may be accessed through the console 24. In the depicted embodiment, the bandwidth control process is shown as operating on the back up server 12, however it will be apparent to those of skill in the art that the bandwidth control process 44 may be located on the data servers 18, 20, 22, or on both the data servers 18, 20, 22 and the back up server 12. The user may employ this process 44 to set a network consumption limit for each backup policy and restore operation. When setting this option, the user may select the bandwidth that is available between the source and backup systems, and specify a consumption limit to be allocated to the synchronization and/or dynamic replication processes. If multiple network links are available between the systems, the user may specify the slowest link. Further, the bandwidth control process 44 may include a process for determining, either dynamically, or historically, the available network resources, including network bandwidth and buffer availability, for a given time. The determined resources may be provided by the user through the console process 24, or automatically employed by the bandwidth control process 44 for selecting network consumption limits. The design and development of such a process for determining available network resources follows from principles well known in the art, including those set forth in U.S. Pat. No. 5,920,701, Scheduling

data transmission, by Miller, C. Kenneth et al., the teachings of which are herein incorporated by reference." (Midgley, col. 19, lines 10-52).

Accordingly, Midgley describes a mechanism for limiting the bandwidth which may be used by a particular process by setting a consumption limit. The decision as to the limit chosen may be based on available resources such as network bandwidth or buffer availability. Consequently, Midgley is directed at limiting the amount of resources which may be used by a process via a bandwidth control process. Rubin discloses a system for buffering objects in a database system. Rubin generally describes reserving buffers for use by specific objects. With respect to prior claim 3, paragraph 8 of the Office Action suggests that Rubin teaches the features of this claim. Prior claim 3, the features of which have been incorporated into claim 1, recited:

"3. The computing system as recited in claim 2, further comprising a memory pool, and wherein said replicator is configured to:
    allocate buffers from said memory pool for said write transactions;
    convey said write transactions to said first storage device; and
    modify a size of said memory pool in response to said I/O characteristics."

In the present Office Action, it is suggested that Rubin discloses these features in the following:

"In addition to partitioning the memory into multiple buffer caches, the present invention allows the user to partition the individual buffer caches into multiple memory pools. This aspect of the invention provides advantages in memory management regardless of whether the system employs more than one buffer cache. Each memory pool within a buffer cache contains a plurality of identical MASSes (the smallest units of storage in a buffer cache). For example, one memory pool of a buffer cache may contain 500 k MASSes of 2 bytes each, while a second memory pool of the buffer cache may contain 100 k MASSes of 64 bytes each. Thus, each named buffer cache can be tailored to the type of objects to be stored therein. Buffer caches intended to hold relatively large data objects would be preferably set

up with memory pools having relatively large data blocks." (Rubin, col. 8, line 60 – col. 9, line 7).

However, as seen from the above, Rubin merely discloses that a user may partition an individual buffer into multiple memory pools. Rubin does not disclose or suggest modifying a size of a memory pool in response to said I/O characteristics as recited. Accordingly, the combination of Midgley and Rubin does not disclose all the features of claim 1. Rather, the combination may merely suggest a system wherein resource usage by a process may be limited (i.e., setting a consumption limit as disclosed by Midgley) and, if desired, a user could partition memory into multiple buffers with each being further partitioned into multiple pools. Therefore, Applicant submits the combination of Midgley and Rubin does not disclose all the features of claim 1. Accordingly, claim 1 is believed patentable over the cited art. As each of claims 9 and 17 include features similar to that of claim 1, each of these claims are believed patentable for similar reasons. Each of the dependent claims are likewise patentably distinct for at least the above reasons.

In addition to the above, the dependent claims recite features neither taught nor suggested by the cited art. For example, claim 7 recites the further features "wherein said replicator is further configured to: provide said recorded characteristics for display; provide guidelines for modifying resources of said system; and modify said resources based upon user input." It is suggested (paragraph 12 of the Office Action) that these features are disclosed at col. 19, lines 25-65 of Midgley. However, Applicant can find no such disclosure in Midgley. The cited portion of Midgley merely discloses the possibility of determining available resources and setting a bandwidth usage limit. Accordingly, Applicant submits claim 7, and similarly claim 15, is patentably distinct for this further reason.

Applicant believes the application to be in condition for allowance. However, should the examiner believe issues remain, the below signed representative requests a phone interview (512-853-8866) of facilitate a speedy resolution.
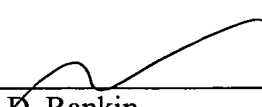
CONCLUSION

Applicant submits the application is in condition for allowance, and notice to that effect is respectfully requested.

If any extension of time (under 37 C.F.R. § 1.136) is necessary to prevent the above-referenced application from becoming abandoned, Applicant(s) hereby petition for such an extension. If any fees are due, the Commissioner is authorized to charge said fees to Meyertons, Hood, Kivlin, Kowert, & Goetzel, P.C. Deposit Account No. 501505/5760-12100/RDR.

Also enclosed herewith are the following items:

☒ Return Receipt Postcard

Respectfully submitted,

Rory D. Rankin
Reg. No. 47,884
ATTORNEY FOR APPLICANT(S)

Meyertons, Hood, Kivlin,
   Kowert, & Goetzel, P.C.
P.O. Box 398
Austin, TX 78767-0398
Phone: (512) 853-8800

Date: __11|4|05__